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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,921	10/20/2003	Yao-Ching Su	025789-00010	8340

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EXAMINER

BODDIE, WILLIAM

ART UNIT	PAPER NUMBER
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2629

NOTIFICATION DATE	DELIVERY MODE
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08/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/687,921	Applicant(s) SU ET AL.	
	Examiner WILLIAM L. BODDIE	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) 6-9,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 10, 12-13 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In an amendment dated, May 5th, 2008 the Applicants amended claims 1, 4, 9, 10, 13 and 16. Currently claims 1, 3-5, 10, 12-13 and 16 are pending.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 5th, 2008 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 3-5, 10, 12-13 and 16 have been considered but are moot in view of the new ground(s) of rejection.

4. On pages 8-9 of the Remarks, the Applicants traverse the rejection of claims 1 and 3 on the grounds that the gap length is not a result effective variable. The Examiner must respectfully disagree.

5. It is well-known that any pixel not including a data electrode will not illuminate. The Applicants themselves concede that it is known in the prior art that the dual scan gap creates a dark area between the data electrodes (para. 5). Were Kosaka to separate the data electrodes for any longer than shown in the annotated figure, shown below in the rejection of claim 1, then at least an entire row of pixels would not illuminate. This is certainly a result that would be detrimental to the display quality of

the screen. In short, the Applicants have stated in their own specification that a result of the dual scan gap is a dark area and it is very well-known that removing data electrodes from select pixels would result in the pixels not functioning. For these reasons rejections of claims 1 and 3 are seen as sufficient and are thus maintained.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 16 recites the limitation "said data electrodes" in lines 10-11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3-5, 10, 12-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosaka (US 6,727,869) in view of Sano et al. (US 7,002,296) and further in view of Kim (US 7,067,977).

With respect to claims 1 and 3, Kosaka discloses, a plasma display panel with barrier ribs (29 and 19 in fig. 8) configured in a closed shape (rectangle in fig. 8) comprising:

a plurality of sub-pixel cells (28'-1 for example in fig. 8) each having a cell area defined by said closed shape barrier ribs (clear from fig. 8);

a plurality of said sub-pixels cells in a delta configuration defining a color pixel (col. 11, lines 5-7);

a plurality of sustain electrodes each space apart in a row direction at a predetermined cell length (X1-3 and Y1-3 in fig. 8);

a plurality of data electrodes (A1, A3 in fig. 8) overlapping a wall of said barrier ribs in a column direction (29 in fig. 8), each of said data electrodes extending under said cell area (clear from fig. 11), wherein each data electrode substantially aligns with a barrier rib in the column direction (29 in fig. 8); and wherein

a dual scan gap (clear from fig. 12) of predetermined gap length is formed between a pair of said data electrodes (A1, A3 in fig. 8) in the column direction and at least partially overlapping the barrier ribs in a column direction (clear from fig. 8), and

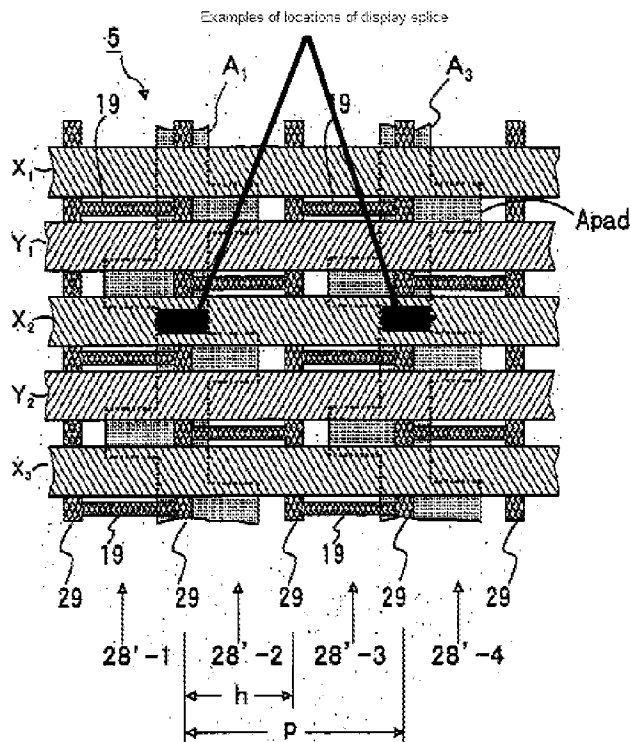
a gap is formed between said barrier ribs in a row direction and said data electrodes (clear from figs. 8 and 12).

Kosaka does not expressly disclose that the gap is less than 40% of the cell length.

Based on figure 12, it is clear that Kosaka intended that the alternating protrusions of the data electrodes continue from one half of the panel to the other. With this in mind, we turn to figure 8, where when the data electrodes are split it should be clear that there would be a gap between the row ribs, 19, and the data electrode. Unless an entire row of pixels is to be lost, the gap will be less than 40% of the cell length. See the below annotated figure for further explanation.

Therefore it would have been obvious to one of ordinary skill in the art to make the display splice in a manner to ensure that the gap between a rib and data electrode is minimized to ensure proper discharge of the last pixel that the data electrode is present in. Thus the decision to design the plasma panel so as to achieve a gap of less than 40% is seen as an optimum range that would have been obvious to one of ordinary skill in the art at the time of the invention.

FIG. 8



Kosaka does not expressly disclose wherein both the data electrode and the sustain electrode are substantially the same width as the barrier rib in the column direction and the row direction, respectively.

Sano discloses a plasma display panel (fig. 4; for example) with barrier ribs (16 in fig. 7) configured in a closed shape (rectangle in fig. 7) comprising:

each data (14 in fig. 7) and sustain (13 in fig. 7) electrode is substantially the same width as the barrier rib in the column and row direction (clear from fig. 7), respectively.

Sano and Kosaka are analogous art because they are both from the same field of endeavor namely plasma display panel electrode design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to size the electrodes of Kosaka as taught by Sano for the well-known benefit of reducing crosstalk and to increase the luminance of the display (Sano; col. 18, lines 64-66).

Neither Sano nor Kosaka expressly disclose wherein each sustain electrode substantially aligns with a barrier rib in a row direction.

Kim discloses a plasma display panel (fig. 4; for example) comprising:
a plurality of sustain electrodes (Y1-Yn; Z1-Zn in fig. 7), wherein each sustain electrode substantially aligns with a barrier rib (50a in fig. 7) in a row direction.

Kim, Sano and Kosaka are analogous art because they are both from the same field of endeavor namely plasma display panel electrode design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to align the sustain electrodes, of Kosaka and Sano as taught by Kim, to increase the luminance of the display, by decreasing the amount of electrode blocking the cell.

With respect to claim 4, Kosaka, Sano and Kim disclose, the panel of claim 1 (see above).

Kosaka further discloses, wherein said gap length is smaller than said cell length (see above) and said dual scan gap crosses over one of said barrier ribs in a row direction (clear from figs. 8 and 13).

With respect to claim 5, Kosaka, Sano and Kim disclose, the panel of claim 1 (see above).

Kosaka further discloses, wherein said data electrodes have an expanded portion in said cell area (clear from figs. 8 and 11).

With respect to claims 10, 12-13, these claims are seen as merely method versions of the above rejected claims 1 and 3-4 respectively. As such they are rejected on the same merits shown above in the rejection of claims 1 and 3-4.

With respect to claim 16, Kosaka discloses, a plasma display panel with barrier ribs (29 and 19 in fig. 8) configured in a closed shape (rectangle in fig. 8) comprising:

a plurality of sub-pixel cells (28'-1 for example in fig. 8) each having a cell area defined by said closed shape barrier ribs (clear from fig. 8);

a plurality of said sub-pixels cells in a delta configuration defining a color pixel (col. 11, lines 5-7);

a plurality of sustain electrodes each space apart in a row direction at a predetermined cell length (X1-3 and Y1-3 in fig. 8);

a plurality of data electrode pairs overlapping (1, A3 in fig. 8) a wall of said barrier ribs in a column direction (29 in fig. 8),

a dual scan gap (clear from fig. 12) of predetermined gap length is formed between a pair of said data electrodes (A1, A3 in fig. 8) in the column direction and said dual scan gap crosses under said barrier ribs in a row direction (clear from fig. 12).

Kosaka does not expressly disclose wherein the sustain electrode is substantially the same width as the barrier rib in the row direction.

Sano discloses a plasma display panel (fig. 4; for example) with barrier ribs (16 in fig. 7) configured in a closed shape (rectangle in fig. 7) comprising:

each sustain (13 in fig. 7) electrode is substantially the same width as the barrier rib in the row direction (clear from fig. 7).

Sano and Kosaka are analogous art because they are both from the same field of endeavor namely plasma display panel electrode design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to size the electrodes of Kosaka as taught by Sano for the well-known benefit of reducing crosstalk and to increase the luminance of the display (Sano; col. 18, lines 64-66).

Neither Sano nor Kosaka expressly disclose wherein each sustain electrode substantially aligns with a barrier rib in a row direction.

Kim discloses a plasma display panel (fig. 4; for example) comprising:

a plurality of sustain electrodes (Y1-Yn; Z1-Zn in fig. 7), wherein each sustain electrode substantially aligns with a barrier rib (50a in fig. 7) in a row direction.

Kim, Sano and Kosaka are analogous art because they are both from the same field of endeavor namely plasma display panel electrode design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to align the sustain electrodes, of Kosaka and Sano as taught by Kim, to increase the luminance of the display, by decreasing the amount of electrode blocking the cell.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM L. BODDIE whose telephone number is (571)272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/

Supervisory Patent Examiner, Art Unit 2629

/William L Boddie/

Examiner, Art Unit 2629

7/24/08